

## RESECTION OF THE MIDDLE THIRD OF THE STOMACH FOR CARCINOMA OF THE GREATER CURVATURE.

END-TO-END ANASTOMOSIS; RECOVERY.

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THIS case is of interest because (1) Carcinoma of the greater curvature of the stomach is unusual. According to Fenwick, 58 per cent. of all gastric carcinomata are pyloric. Upon the contrary, but 2.8 per cent. are of the greater curvature. (2) The growth did not infiltrate the submucosa as is commonly the case with pyloric carcinoma. (3) The growth had attained considerable size without causing many symptoms of gastric disturbance, for neither the pyloric nor the cardiac portions of the stomach were invaded. (4) The transverse colon was not involved in the disease. (5) An end-to-end anastomosis was done, using an interrupted Connell suture. (6) The technique of the operation was very greatly facilitated by the employment of clamps according to the methods of Kocher, Hartmann, Mayo, and Moynihan.

F. M. M. entered my hospital service in the summer of 1904. She was thirty-seven years old and married. She was well previous to March, 1904, at which time she began to have spasmodic pains in the abdomen, a little to the left of the umbilicus. These pains persisted for some days and then disappeared. The character of the pain was dull, pressing, deep-seated, below the tumor subsequently discovered. The pain was increased by coughing, sneezing, and bending of the body. On May 30, 1904, not having had any abdominal pain for some weeks, the patient discovered a small swelling to the left of the umbilicus, at the site of the previously described pain. The bowels were regular, and the appetite was fair. She had lost three pounds in weight. She was well developed, only fairly well nourished, and rather thin.

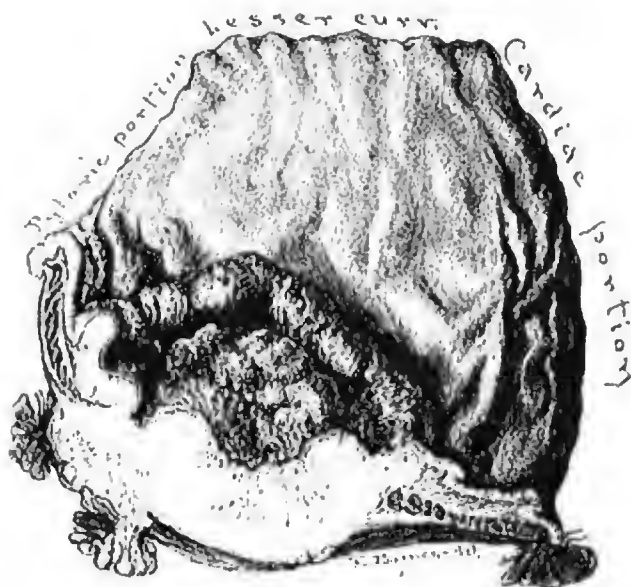


FIG. 1.—Posterior wall of stomach. One half the portion of the stomach removed. Note the tumor cut in its middle; situation of tumor at greater curvature; normal stomach upon either side of the tumor, towards cardia and pylorus. Note where the growth was attached to the anterior abdominal wall.

Carcinoma.

Normal tissue.

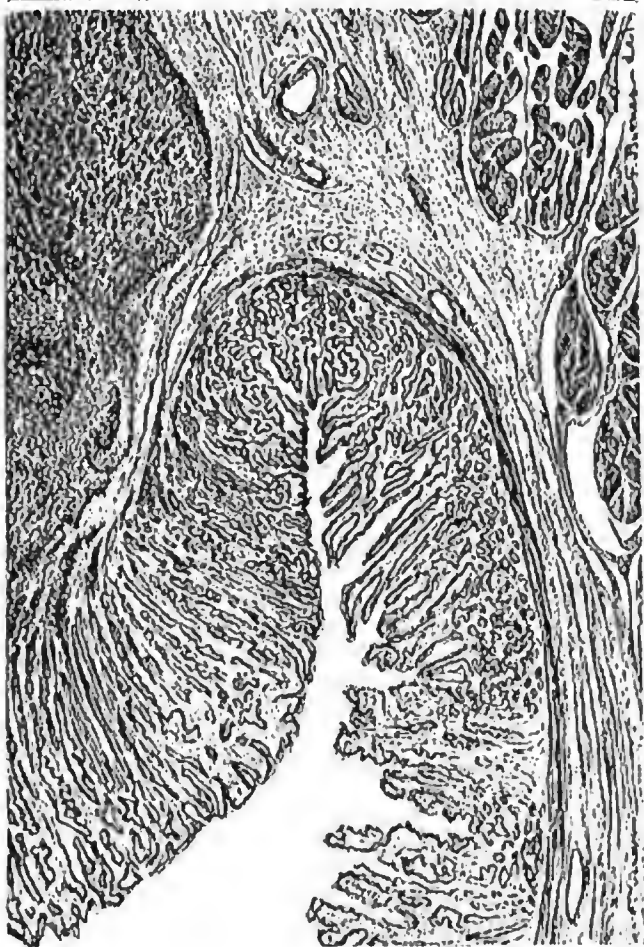


FIG. 2.—Microscopical section taken from the edge of the new growth. Note that the carcinoma is rather sharply defined, and that it does not in this instance extend, as is often the case, beneath the mucous membrane into sound tissue.



FIG. 3.—Showing site of incision, the thin, small woman, and natural appearing abdomen.

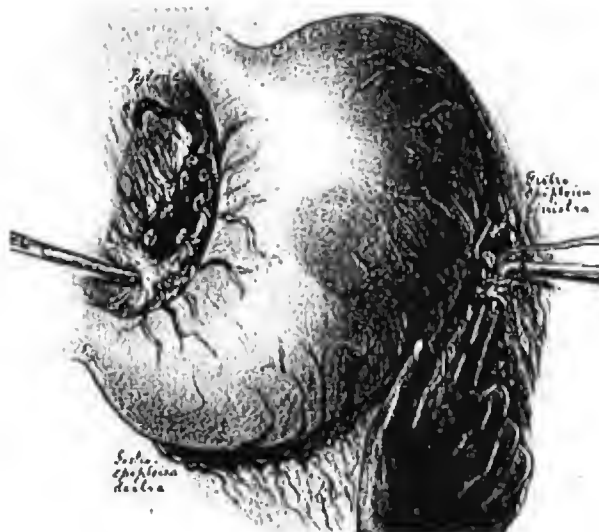


FIG. 4.—The technique of a partial gastrectomy. The pylorus is left in situ. The cross (+) indicates the situation of the most anterior portion of the growth. Ligature of the gastro-hepatic omentum and of the great omentum. Note blunt instrument tearing open gastro-hepatic omentum preparatory to ligation. Note finger and Cleveland ligature carrier used in tying off great omentum.

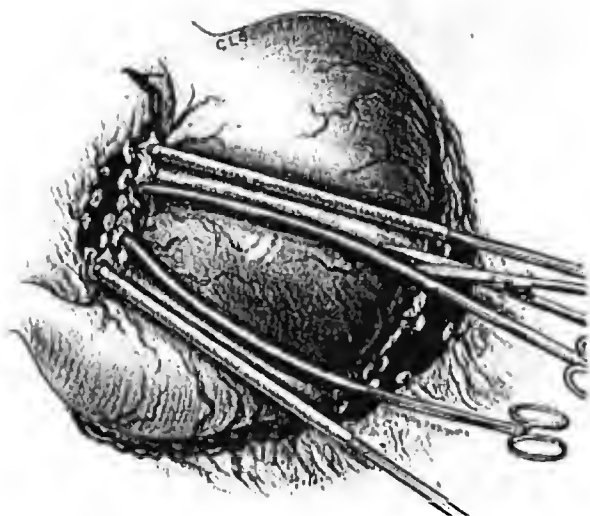


FIG. 5.—Partial gastrectomy. The omenta tied off. Rubber covered compression clamps applied to the most proximal and distal portions of the stomach. Crushing clamps applied to the part of the stomach to be excised. The section is made between both pairs of clamps.

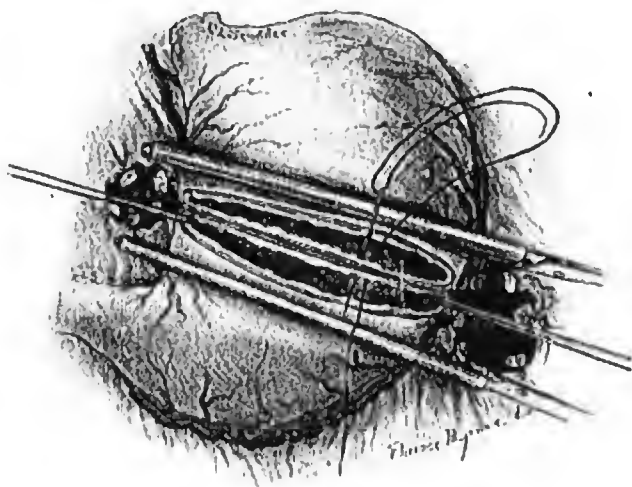


FIG. 6.—Partial gastrectomy. The rubber covered clamps serve to hold the two parts of the stomach approximated together, to prevent hemorrhage, to prevent soiling of the operation field by stomach fluid. Note Connell interrupted suture being placed. Note two long traction sutures.

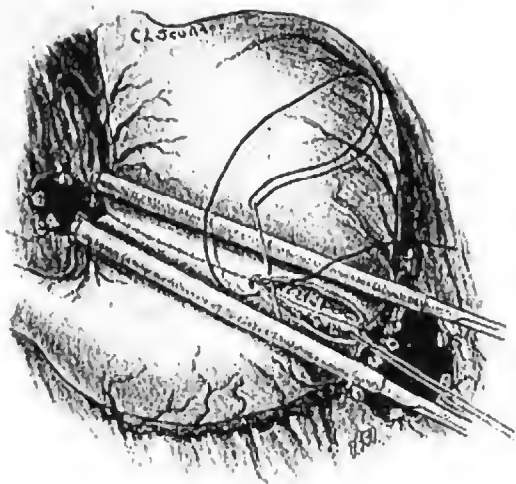


FIG. 7.—Partial gastrectomy. Note clamps and method of employment. Posterior wall completely sutured by Connell suture. Anterior wall partly sutured, one-half of a suture taken, remainder being taken.

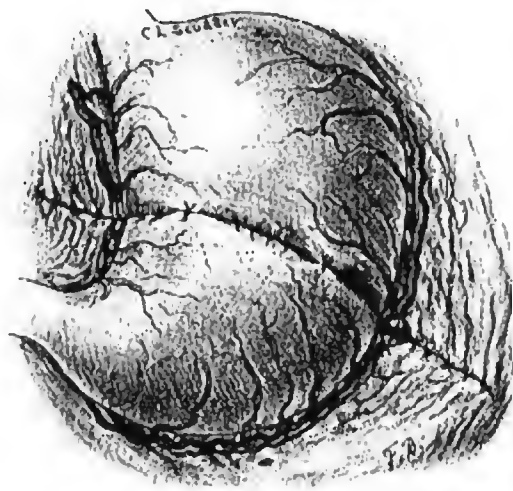


FIG. 8.—Partial gastrectomy. Completed operation. Omenta sutured. Note the four interrupted Lembert sutures to reinforce the Connell suture.

The skin and mucous membranes were pale. Many of the teeth were missing, and those remaining were carious and neglected. Slightly enlarged glands existed in the neck and groin. To the left of the umbilicus was a rounded mass about four inches in diameter, slightly tender, hard, and smooth. This mass was attached to the abdominal wall. It did not move with respiration and was not easily displaced. The percussion note was dull over the mass. Upon inflation of the colon, the dull area of the mass became a little more prominent. The liver extended from the sixth interspace to one inch below the costal margin. The spleen was palpable.

July 1, 1904, the abdomen was opened. The mass which had been felt was found to be slightly adherent to the anterior abdominal parietes a little to the left of the median line. The peritoneum over the mass, from which it was with ease separated, was slightly oedematous. After separating the mass from the abdominal parietes, the parietal peritoneum showed no loss of substance. It was intact. A slight induration existed in the parietes where the mass had been adherent. The omentum was slightly thickened and adherent to the mass. This was separated. The tumor was seated at the middle of the greater curvature of the stomach. The tumor was entirely free and presented no other adhesions to the parts about. The stomach was withdrawn from the abdomen. Gauze packing was placed about the stomach. The gastrohepatic omentum and the great omentum were ligated. The stomach was double-clamped upon both sides of the growth, the middle third of the stomach, including the largest portion of the lesser curvature, was removed, the divided surfaces of the stomach were united by means of an interrupted Connell mattress suture. The suture line was reinforced by one or two interrupted Cushing sutures, a plastic of the omentum was placed both anteriorly and posteriorly to the suture line, the parts were flushed thoroughly with normal salt solution, the walling off gauze was removed and the stomach returned to the abdomen. The abdominal incision was closed with through-and-through silkworm-gut sutures. Except for a slight upset of the bowels, two weeks after the operation, the patient made a good recovery. The temperature did not rise above about 99° F. There was no shock from the operation, and the patient is now taking ordinary food with comfort and benefit. The accompanying figures illustrate the technique and findings of this case.



The feeding of this patient immediately after operation was as follows: She was fed for about one week upon nutrient enemata containing milk, three ounces; one egg; salt solution, one ounce. A nutrient enema was given every eight hours. Each morning a cleansing enema was used, to thoroughly wash the lower bowel. On the fourth day she was allowed water by mouth, on the ninth day liquids, and upon the tenth day soft solids.

*Report of the Hospital Pathologist.*—The specimen consisted of the middle portion of the stomach for its whole circumference. It was, after hardening, four centimetres on the lesser curvature, and on the mid-point nine centimetres in diameter. On opening, on the greater curvature was a rounded ulcer five centimetres in diameter, with raised indurated edges, and a rough, swollen base. On section, the base and borders of the ulcer were composed of hard, grayish, white tissue which had replaced the mucous membrane and the entire wall of the organ for a distance of five centimetres. At the edges the growth was continuous with the mucous membrane and did not tend to infiltrate the submucosa.

Three soft lymph nodes were also received. (a) Near the seat of the tumor; (b) from the mesocolon; (c) from the lesser omentum.

*Microscopic Examination* showed the base of the ulcer composed of solid masses of atypical epithelial cells separated by a small amount of fibrous tissue. These cells had infiltrated the walls of the stomach, extending through them to the peritoneum. They were of small size, closely packed together, with rounded nuclei, many of which were undergoing mitoses. The protoplasm was small in amount, and the outlines not sharply marked. Although the cells in most places were in solid masses, some showed glandular arrangement. The growth was everywhere infiltrated with round cells, and near the surface by large numbers of leucocytes. There was a good margin of normal tissue on each side between the edge of the ulcer and the cut edge of the specimen. Examination of the lymph nodes showed simple hyperplastic lymph adenoid tissue. Diagnosis, carcinoma.

(Signed)

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[NOTE.—At present, April, 1905, some ten months after operation, this patient is in good health.]